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"THE JOURNAL"

Official Organ of the

AUSTRALIAN MODEL RAILWAY ASSOCIATION

For All Who Are Interested in Scale
Model Railroading

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-Member Australian Standards Association-

Affiliated with the Australian Association of
Model Societies.

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EDITORIAL.

The Annual Elections of Office Bearers are over for another term and there were no further nominations received, so the old Committee, to a man, agreed to carry on for a further twelve months.

Mayer Levy, having completed the term of Presidency which he filled on the unavoidable resignation of our previous President Cliff Richardson, Geoff Lormer was elected to the position and Mayer took over the job of Treasurer from Ernie Dean, who, in turn, became Asst. Editor. So that now the Committee's personnel are:

President:	Geoff	Lormer
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whilst elected Committeemen are:

Jack	Chaplin
Herbert	Tisher
Fred	Youie.

Members may rest assured the best interests of the Association will continue to be served, as in the past.

And here, let me welcome our new President, Geoff Lormer, to the ranks of Contributors to The Journal.

You would really need to be the Editor of an honorary journal to realize the satisfaction of a chap coming forward voluntarily with, not only an article in part form but a list of suggested subjects from which to choose a series of articles. I feel sure Geoff's full handling of his subject on scaling down will give all rails serious food for thought.

And young Ian Weickhardt has written his first contribution also, but knowing Ian I also know full well it will be but the forerunner of others as time goes on. To these members, and all Contributors, I say, "Thanks, chaps."

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SIGNALLING AND SIGNAL CIRCUITS

by N. Levin.

(continued from page 7, May issue)

In most circuit drawings, symbols are used to represent certain pieces of apparatus. This tends to simplify a complex circuit drawing and so make it easier to read.

In Fig. 1 I have shown a few symbols that I use myself which will give you the idea. From what I can gather there are not any standards for these symbols and most railways have their own, therefore if you want a particular symbol for a particular piece of apparatus, you invent it yourself.

Before we look into circuits on signals, a word about this instrument.

There are many types of signals and systems in use in the world today, it does not matter what type of signal or system of signalling you use, the idea of using it is the same for all:- A SIGNAL IS USED TO INDICATE TO A DRIVER OF A TRAIN WHETHER THE SECTION HE IS ABOUT TO ENTER IS OCCUPIED OR CLEAR.

Another definition:- A SIGNALLING SECTION IS A LENGTH OF TRACK BETWEEN TWO SIGNALS, THE SIGNAL AT THE END AT WHICH THE TRAIN ENTERS IS THE SIGNAL CONTROLLING THE SECTION.

WHERE DO WE USE SIGNALS?

This is an extensive study and naturally we cannot go into it too deeply here, but for the beginner there are several books on the market that go into the study fully enough for modellers.

Here is a little dope you can use to start with.

Prototype sections for signalling are not always the same length, in the signal sections in the suburban area where there is a lot of traffic, the signal sections are short, (in congested areas only a train length and half, long) but in country areas where stations are a considerable distance apart and only have a limited traffic, the sections are very long, (sometimes one between stations)

Therefore, on our layout we work out which of our areas will be congested and here we make our sections short, out on the main lines they can be lengthened.

On a drawing of your layout mark out the positions of your signal sections. At the entrance to each section mark the type of signal, that is, HOME or DISTANT. Now say you are the driver of a train traversing the layout, Can you be fully in control at Turnouts, Stations, Junctions, etc.? If so, your signalling system is O.K.

If you are using manual signalling be sure you use the correct type of signal at each point, i.e., square end semaphore HOME, fishtail semaphore DISTANT.
(IN MOST LAYOUTS THE DISTANT IS USUALLY OVERLOOKED AS THE SIGNALLING SECTIONS ARE TOO SHORT)

If using AUTOMATIC signal they are distinguished as follows:-

(a) Automatic Only. Fishtail, with marker light diagonally across mast.

(b) Controlled Only. Square tip, with marker light vertically under signal lamp.

(c) Controlled, switchable to Automatic Usually square-tipped, this signal has a marker light in the normal position for CONTROLLED-working, and this turns out and either a marker in the normal for AUTO or an illuminated letter A turns on, switching

being carried out in the controlling signal box.

From the above you may gain a small idea of prototype signalling.

Now we carry on with the ways and means which will allow us to install AUTO or AUTO-CONTROLLED signalling on our own layout.

The methods of signalling that follow will all be of the type where the train wheels do the switching on local track circuits, and can be used only where we have the two outside rails insulated from one another and the wheels actually short-circuit the two outside rails together, or TWO RAIL.

Therefore, if you have TRIX, do not follow this article, but look for the next one.

Now in this system it is essential that one RUNNING-RAIL be nominated for the EARTH-RAIL (say the Lefthand rail as you look along the track in the direction the train will run.) This rail will be CONTINUOUS around the layout, so it is best to have this rail standard (as nominated above) so that you will not strike trouble later when wiring.

The other RUNNING-RAIL (nominated as the Right-hand rail) will be called the signalling rail. This SIGNALLING-RAIL is cut at the beginning of each signalling section with a saw-cut and the gap left should be about .050" wide, this will allow for expansion of the rail in hot weather or when lights are playing on the baseboard. A piece of celluloid fitted to the gap will stop the gap from closing, filed to the shape of the rail section.

All these joints in the EARTH rail are joined by small bonds of wire soldered across them, as in Fig. 2.

Each SIGNALLING rail has a wire soldered to it which is lead away to the signal or relay controlling that section.

CIRCUITS:

For the modelrails who have made up the "two aspect" signals as described in the last two Issues of the Journal, Fig. 3 shows a circuit for the Auto-operation of these signals without the use of relays.

Fig. 4 shows the circuit modified to allow CAB-control of the AUTO signal, i.e., a CONTROLLED signal

(NOTE) This circuit is arranged so that the two globes in parallel are of the same resistance, and type. A detailed description of these circuits will follow for those who get lost in the maze of wires, so simply wire as sketched, and if you use the same types of globes for the Red and "B", you will find it works quite satisfactorily.

Fig. 5 shows the circuit again modified for use at a Junction where the turnout operating rod has two pairs of change-over contacts on it, or else the key operating the points has the extra contact. Here, when the turnout is set for one direction, the signal governing the opposite leg is locked to red.

(NOTE) Just a word on prototype signalling again. One signal on one mast, then reading the signals from top to bottom. Signals at a Junction are usually arranged on opposite sides of the mast, Fig. 6 The signal on the left denotes the left hand road and the signal on the right, the right hand road. Where there are several roads breaking away from the main line close together, then there is usually a gantry to carry the conglomeration of sticks, and the rule still holds: Reading from left to right, signals and tracks from left to right. Therefore, at a turnout set for the left hand road, the signal on the

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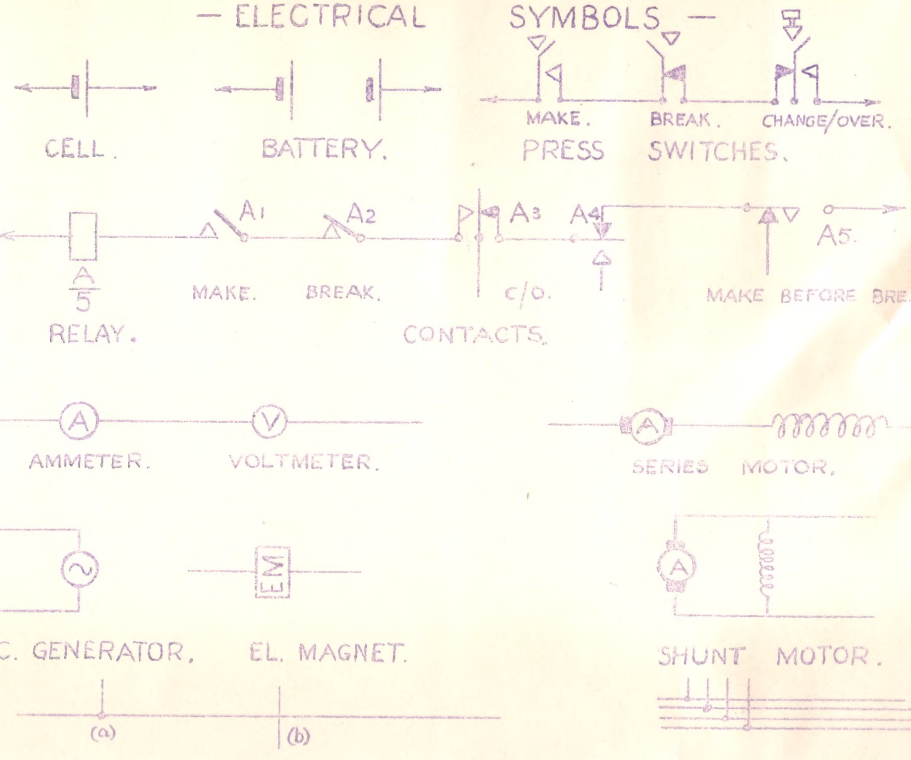


FIG. 1.

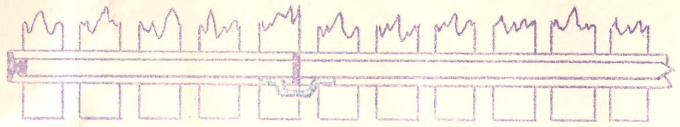


FIG. 2.

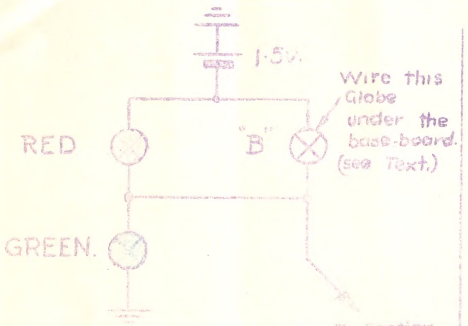


FIG. 3.

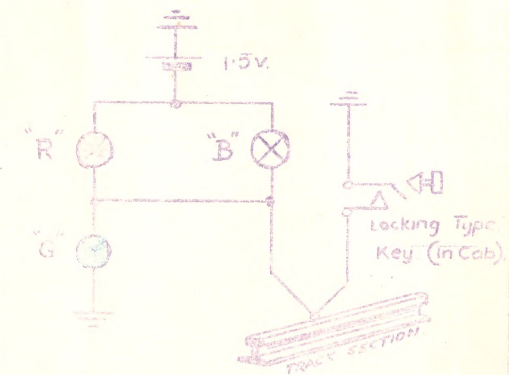


FIG. 4.

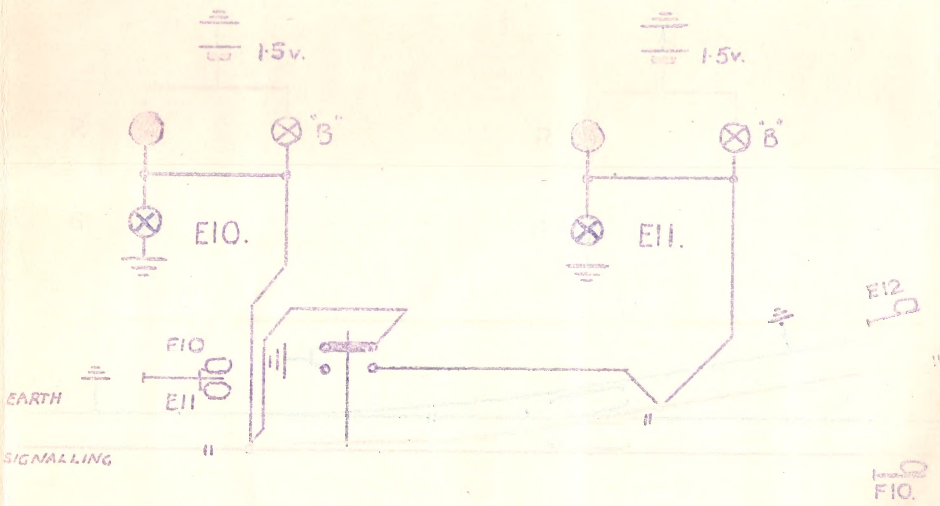


FIG. 5.

FIG. 6.

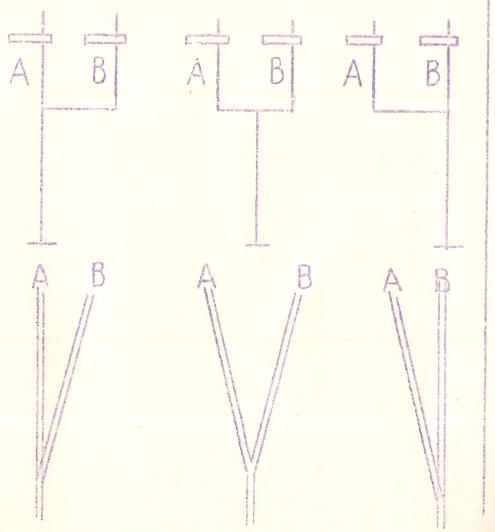
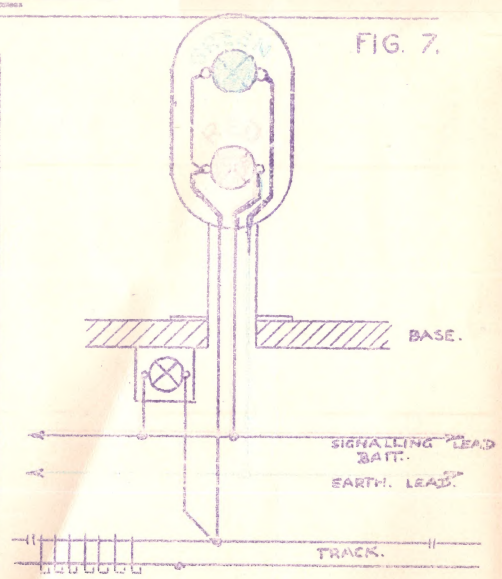


FIG. 7.



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SIGNALLING & CIRCUITS.

2 ASPECT — COLOUR-LITE.

DRAWN by N. LEVIN. 26. 6. 53.

FOR USE BY AMRA.

left hand side of the mast will indicate the condition of that road, but the signal indicating the right hand road will show red as it is blocked to the train. With manual signals you may have more than one signal on the same mast, and if at junctions the top arm will indicate the left road, the second arm the next to the right, and so on. Therefore, on approaching a junction we should see one signal only indicating a clear road, and the other blocking.

Now here we have a small collection of the simple circuits not using relays, but even so, if our layout is complex so our signalling wiring and allocation of signals becomes complex. To make things a little easier for the wirer and the signalman, we number all our signals and sections. Thus, when a train is approaching the Home signal No. 10 on the Indicator, check the section and if clear, we clear the signal by clearing No. 10 lever (or switch). So when making your diagram with sections, allocate route letters to tracks through the main station, and beyond, then all the signals out from the station should have numbers. (These can be painted on the actual signals on the number plate). Enter these letters and numbers on the chart with the sections.

When the track has been sectioned, fit the signals approximately six to eight inches in front of the section gap so that when the train enters the new section the loco. appears to be past the signal before it changes. (In prototype the signal relays and changeover of lights takes approx. 5 to 10 secs. to complete the change, thus if you watch, the leading vehicle appears to have passed the signal before the change takes place.) The wiring diagram in Fig. 7 shows how to wire the circuit up.

The BATT. lead shown leads off to a 1.5v AC tapping on the transformer. This voltage is high enough for the globes described in the articles on

making the signal. These were 2.2v globes, but work perfectly on this AC tapping. Any higher voltage on AC will shorten the life of the globe. The Earth lead is the other side of the AC tapping and is connected to the Earth rail. So keep this tapping for signals only.

Now, when the wiring is completed, keep the train power turned OFF, and have only the signal power ON. The signal should show a Green light. If it does then all appears to be well, BUT - take a metal-wheeled wagon or loco and place it on the section in front of the signal. When you have finished admiring the effect - (Knowing chap! - Ed) move the loco by hand past the signal and onto the new section, the signal should now change to RED. If this is so then all is well. You will notice that the "B" globe also lights. This is correct, so when wiring the signal "in", wire the globe under the board or put it in a Battery box (scale size, ofcourse) at the side of the line. This will obscure the light when the RED is showing.

There is only one thing left to try, working the loco under it's own power past the signal Well, go ahead and try it on low power. Watch the signal globe intensity and see if it gets any brighter, if it does so appreciably check your circuit and the power feeds to the signal, if it rolls past and the signal changes O.K. - then let 'er roll, boy!

If there are any questions on problems regarding the wiring of your signals or other knick-knacks, please take advantage of this journal and send them into the Editor - he will see that they are answered.

Thanks a lot, Nev. for these grand articles - next Issue Nev. is planning an article on circuits for those using 3-aspect signals, and the use of relays in auto-signalling. - Ed.

LIBELOUS AND SCANDALOUS?

by David Gross.

During my recent vacation I had the opportunity of visiting some of our Interstate members and had some quite interesting discussions with them.

My impressions of these members are outlined below and I sincerely trust that what I write will not be taken as scandalous and libelous, but of interest to AMRA members, in particular to those who have not had the opportunity of personal meeting with these Interstaters.

The first member I visited was Bill (Pacemaker) Gardner. Bill is known to many in this hobby of ours, and his business sense has been well displayed in the mode and manner in which he conducts Pacemaker. When you visit him, you are made to feel at home by the friendliness of both he and his wife, and you can talk trains until the early hours of the morning - in fact until you're exhausted - ask Cliff Richardson - Unfortunately he, like a lot of our friends, suffers from the disability of being so darned far away to air his views in person but those who know him well realise that he has been of great service to the AMRA in many ways, and know that he is always thinking model railways.

The next victims of my travels were Fred and Ray Stannard of "O" Gauge House. These chaps are hard workers, and the success of their work is evident as soon as you enter the precincts of "O" G.H. Here you see a tidy workshop with good machines and fellows behind them who can use them. The primary aim of Fred and Ray is performance, and, because of certain factors, they get results.

It is also a feature there, that in "O" G.H. you see a manufacturing concern which is capable of giving a thorough demonstration of their products, which makes a prospective customer ask what more

proof do I want? Fred outlined a scheme which will perhaps be unique in the history of model railroading and one which should be of benefit, in particular, to many modellers in NSW. It is an Academy for Model Railroaders. It's success will depend on many factors, but let's hope they do the right thing and influence the members of the Academy to use AMRA Standards and so give double-barrelled service to the hobby in Australia.

On my arrival in Brisbane, I contacted Dr. Stephen Suggit who is the AMRA Representative for Queensland. He graciously went out of his way to take me to the Brisbane Model Railway Club meeting, where I met another AMRA member, Harry Harley. Stephen is indeed an untiring host and a very capable model railroader, and it would make a lot of "HO" and "OO" modellers envious of the length of run he has. At a rough guess the main line is 270' long - need I say More?
His 4mm scale C38 is "mighty" and would be the pride of any model railroader. His other locos and rolling stock are worthy models, and his detailing of passenger cars is first class.

At the Club I met 15 or 16 other chaps, to name a few there was Clive McTaggart, Ed Van Fleet and George Heselwood, the names of the others, unfortunately, I have forgotten, but in their Club premises it was evident that they are very active, and most hospitable
I had many questions fired at me and as a result I gained the impression that the AMRA has created an interest up North, and that before long it will be of undoubted benefit to Australian Model Railroading.

-Thanks for your report, Dave - we invite any other members who travel Interstate and contact other modellers to write-up their trip for publication as Dave has done - Ed.

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YOUNG IAN WEICKHARDT BUILDS A LOCO

Ian writes:

Your Federal Secretary, encouraged me to write about my C36 - So:

My loco had it's origin in scrap aluminium, mild steel and copper sheet - I really put all my resources into her. And she returned everything I expected. A real nice little gal, my C36, and that's what I think - Being only fourteen, and never having taken on a big job before, I was all apprehension as I knuckled down to a scale, and not a toy, job.

Main frames of 16ga M.S. were constructed without the aid of a bench, using a broken-down hand-drill, and a smashed vise as a G-cramp. Driving wheel frames were made from 1/4" sq. M.S., and, when complete, I visited Melbourne's best known model professional. There I purchased 6 "Fleet" drivers, which were zealously fitted. Then I robbed one of my prize 3" Hornby coaches of 2 axles and wheels. These were fitted to the front pony truck. As I rolled that chassis up and down my tracks, I felt just like a Kid with his first wooden toy engine and trucks.

Jam tins mysteriously disappeared from our rubbish tin, and by some suspicious means were cut and soldered to form the boiler. Brass was bought for footplates and cab front as tinplate wasn't stiff enough. I fabricated the cylinders, and then carved coupling and connods from "702" section track. Very effective too. About then, one could distinguish the loco as it would look complete. Then I bought and fitted the fittings and many firstclass castings turned out by B.P.R. And they are first-class, too.

So I came to the stage of painting. I gave her a coat of forest green, lining with red.

Fittings and various places were coated flat black I gave the whole works a coat of lacquer as a finish She gave me all I put into her. And How!

This engine was due to the encouragement of Tim Dunlop who I now thank so gratefully for all his "eggin on". I also wish to thank the "Fleet" company, Ra Pearson and Dynamel on their grand assistance and help in every possible way.

-Good on you, Ian It is indeed a real pleasure, at last, after my repeated requests to all members to send in something either on layouts or methods of construction, to receive the first contribution which has come from someone outside that band of 'willing horses', the Committee And from a fourteen-year-old, at that --! -Ed.

-.-.-.-.-.-.-.-.

Rick Richardson has found it impossible, this issue, to write the current instalment of his excellent series, 'Toss Aside Your Tinsnips', owing to the vast amount of spare-time work involved in the preparation of the highly successful Visitors' Night on Fri. June 26th Rick was surprised and delighted at the roll-up - well worth the effort, was his vote. We trust the next Journal will again have the All-clear board for his following chapter'.

I have received an Urgent Signal from our Secretary, Tim Dunlop. Tim asks a favor of all chaps writing bis If the letter is purely a personal, private one, O K but, if you also have AMRA business to discuss, will you write that on a separate letter - to be read out in Committee - even though enclosed in the same envelope!

OVERHEAD WIRING AND OPERATION

Part 1 - Making the Pantograph

by Geoff Lormor.

It has been said that the motion gear of a steam locomotive provides a spectacle which cannot be equalled by even the novelty and glamor of the Diesel Electric. Modellers might easily reject the DE because of its lack of moving parts. However, the same criticism cannot be levelled at the Electric locomotive or suburban electric train operating from overhead wires and with a working pantograph which moves, not only vertically, but also has the illusion of sideways movement caused by the side to side sweep of the overhead wires across the collecting "pan".

Most layouts would be enhanced by the introduction of an overhead section which could provide for a yard working loco , a section of main or branch line with an electric goods service, an electric suburban service, or a main line passenger and goods service. Both NSW and VIC will be using main line electric locos as well as electric goods locos and suburban electric trains.

There is a fascination and realism in overhead operation which is surpassed only by the efficiency of this method of current collection.

Before describing the construction of a model pantograph, let us look into the working features of the fullsize pantograph. It is held down when not in use, by powerful springs, and in operation it is pushed up and kept up, by compressed air, which overcomes the springs and gives a constant force against the overhead wire, of about 20lbs. In the model, however, we will content ourselves with roughly the reverse, i.e., springs will <u>pull</u> it up and we will <u>push</u> it down and provide a clip to hold it when not in use. (By a fluke of the folded arms it will often lock down of its own accord - you might be lucky!)

The next important feature is the equalising rod without which the pantograph will rock backwards and forwards as shown in Figs. 1 and 1a. Each arm is capable of independent movements - one could go up and the other down at the same time, with the result the pantograph turns "inside out".

The legs are connected through cranks by the equalising rod as shown in Fig. 2, (the VR "crossed-leg" type), and Fig. 3, (the less complicated type used almost universally throughout the world and now used by the VR on new electric rolling stock). Imagine a movement in the direction of arrow 1, and then follow the numbered arrows indicating the subsequent movements of other arms. It will be noticed that both sides work together as the movements are co-ordinated by the equalising rod.

The collecting "pan" can be of the single or double type. The horns are curved down so that the wires mounting the pan will do so smoothly even if slightly lower than the centre of the pan.

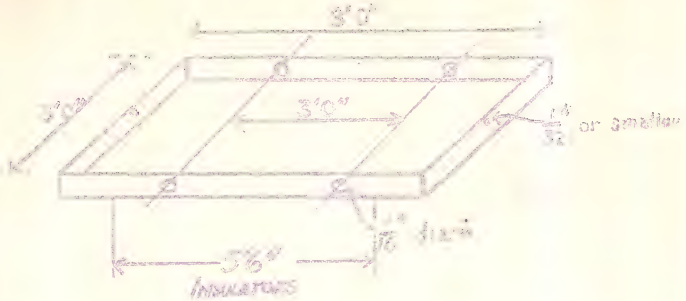
The constructional notes and diagrams to follow describe the VR cross-legged type with double pan, as it is more complicated, but the principles can be used to model the "open" type.

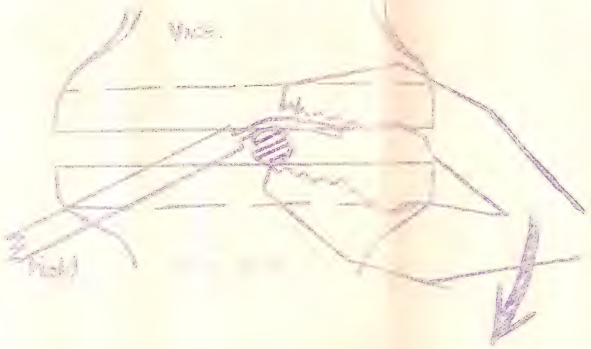
Fig. 4 shows the general layout in side elevation. Fig. 4A is an end elevation indicating the different spacing of the front (A), and rear, (B) legs to enable them to cross.

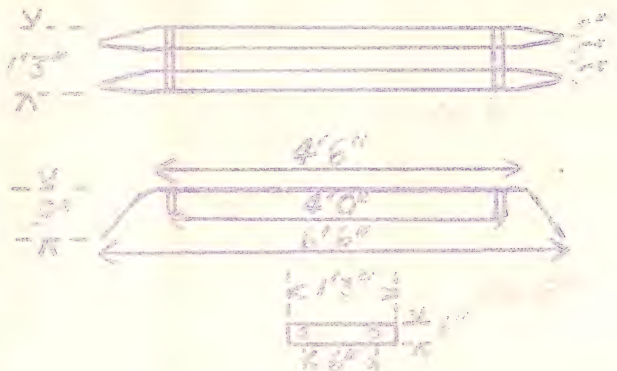
Fig. 4B is a plan. Note that the 'A' legs have (in the model) their outer ends bent <u>out</u>, and the 'B' legs, being wider apart, are bent <u>in</u>. The dotted line is that of the top arms (C).

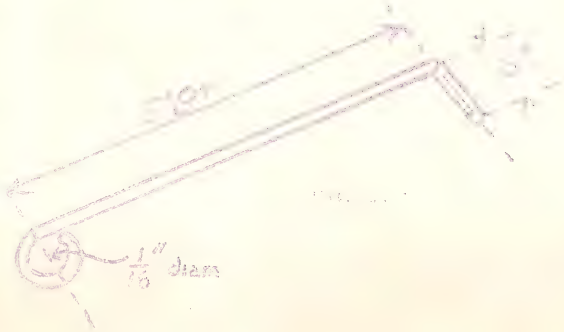
<u>CONSTRUCTION</u>.

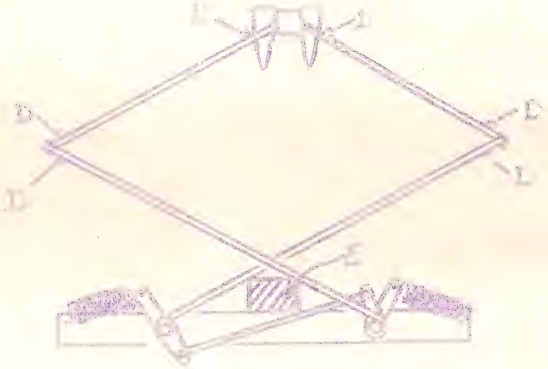
(Note: Any model dimensions given and also the type and size of materials

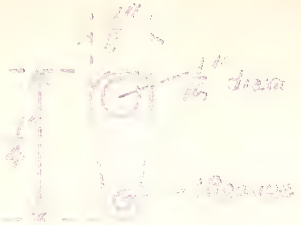


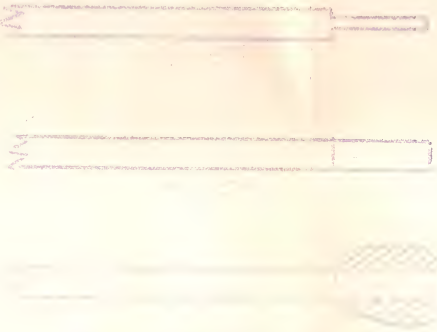


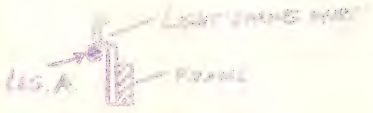


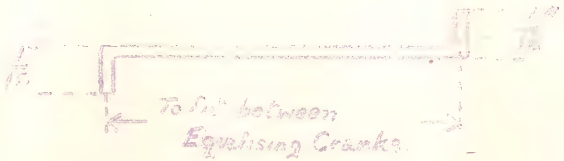


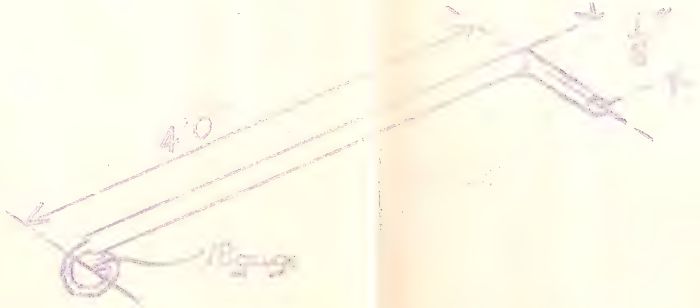






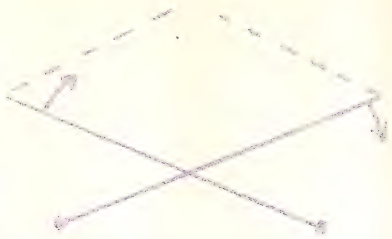






PANTOGRAPHS

DIMENSIONS AND CONSTRUCTION



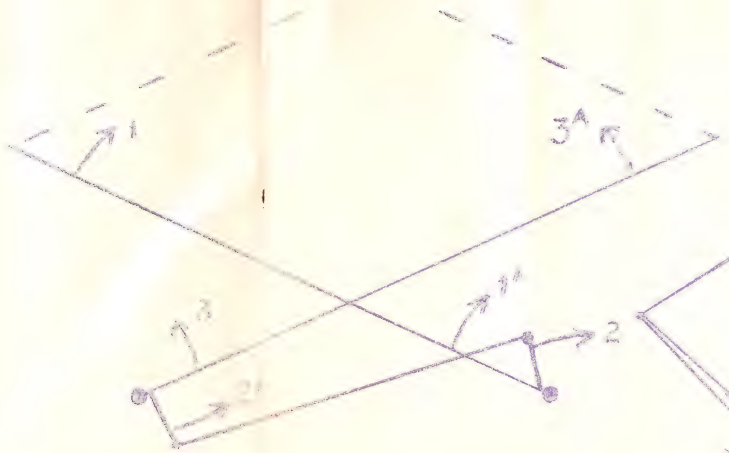
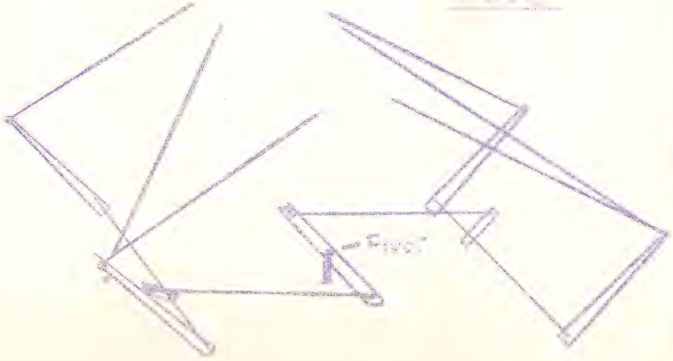


Fig 2.

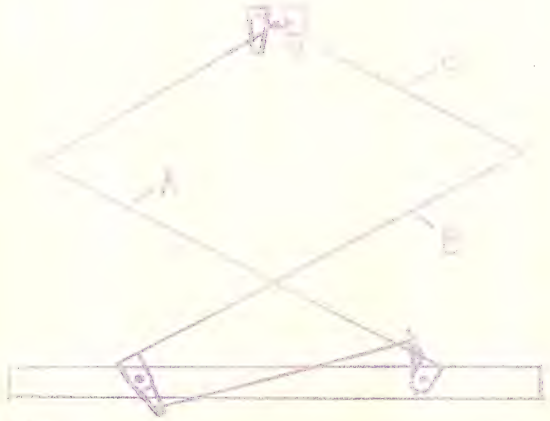
Fig 3.



Alternative horizontal Equalising for "Open" type.

PANTOGRAPHS

— Basic Principles —



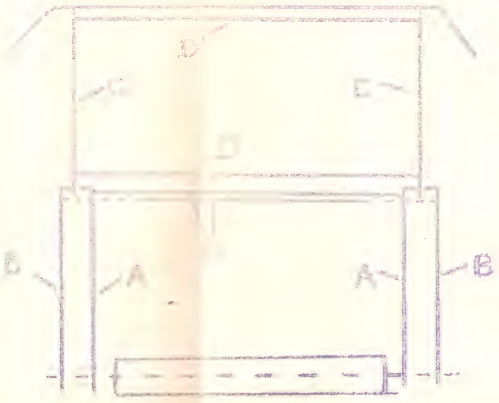


Fig 4A

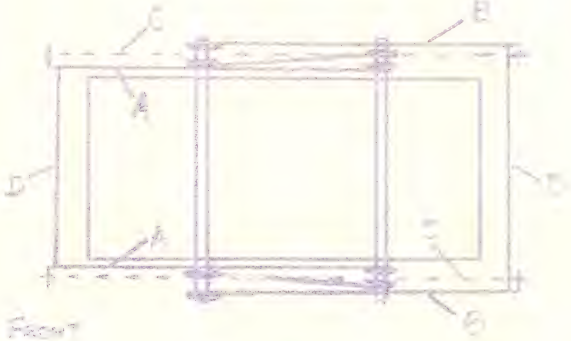


Fig 4B

used is for 1/4" = 1ft. scale.

1. FRAME — Fig. 1. 1/16"x1/8" brass, bent, and soldered in one corner.

AXLES
2. LEGS — 1/16" mild steel, length 4"6. 2 off. Fig. 2. 18gn steel or phosphor bronze wire bent to shape as shown.
2 front legs (A)
2 rear legs (B). Start at the Axle end making the eye, and then measure from the centre of the eye to the point for the bend. Note that 2 are bent to the Left, and 2 to the Right.

3. EQUALISING CRANKS — 4 required. Shaped from 1/16" brass, as shown in Fig. 3.

4. Equalising RODS — 2 required. The length of these rods can be ascertained at a later stage, in assembly. (Fig. 4).

5. TOP ARMS (C) — Fig. 5 4 required. Start at the eye end as follows: Flatten out about 1/4" (Fig. 5A) File away excess in width, shaded area Fig. 5A Result, Fig. 5B (plan) and 5C (elevation). We now shape as in Fig. 5D by method shown in Fig. 5E. When the eye is nearly closed snip off what you judge to be excess so that the end fits back snugly as in Fig. 5D. This gives a firmer bearing than just using the wire still in the round. Now measure from the eye for the bend. Again, 2 are bent to the Left, and 2 to the Right

6. PANS — 2 required. Shape from 1/32" copper as in Fig. 6 and 6A. These are soldered together onto the brackets. Fg6B

7. SPRING LEVERS — Fig. 7. 2 required. These are similar to the Equalising Cranks Fig3.

ASSEMBLY

1. Thread each AXLE through one side of the frame, slip a SPRING LEVER onto each axle, then pass axles through holes on other side of frame.

2. Choose one of the axles as the FRONT axle. On to each projecting end slip an EQUALISING CRANK and a REAR LEG (B) with their bent ends "in" On one side solder both crank and leg on to axle so that crank is at right angles to the leg and pointing"down". Repeat on other side making sure that the legs are parallel and in the same plane.

3. On to each end of the REAR axle slip first a FRONT LEG (A) with bends facing "out" and then an EQUALISING CRANK. These are now soldered such that when the front and rear legs are crossed equally, the cranks are parallel with those on the front axle but pointing "up". Again the legs must be parallel and in the same plane. See Fig. 7.

4. CROSS RODS (D) 22ga wire are now soldered across the top ends of the legs. See Figs. 4B, and 7.

5. Now place a small block or triangular file across the frame under the crossing point of the legs so that the 4 top ends are at the same height. We can now fit on the 4 TOP ARMS and hook their top ends into the PAN BRACKETS remembering that all the bends face "in". Another 4 CROSS RODS (D) Fig. 7 are soldered into place, thus completing the diamond.

6. Check the whole diamond from both sides for symmetry and then fit the EQUALISING RODS, Fg4. Notice that the bends on each end are opposite On the front axle the bend on each side faces "in" and on the rear axle they are "out".

7. The pantograph should now move freely up and down with very little back and forth movement. When satisfied, the equalising rods can be fixed in so that they will not drop out, by a small washer of fine gauge wire sweated onto the tips of the rods projecting through the CRANKS.

8. With the pantograph raised to about normal running height, solder the spring levers in the

centre of each axle so that they are pointing "up" and at right angles to the LEGS. Light springs are then fitted to the levers and frame-ends by hooking into the small holes provided. Now try your luck for the "lock down". If it won't stay down, fit a small clip on the frame to hold down ONE of the FRONT legs. Fig.8.

9. To attach Pantograph to a wooden roof set 4 round head wood screws into place and solder frame to these. For a metal roof small bolts will have to be used through bigger holes with insulating washers and a locknut on each side. Then solder frame to bolt heads. A lead from the frame or one of the supports completes the job.

To facilitate removal and replacement of the pantograph, small size press studs may be used. One half fixed to the roof and the other to the frame.

When painting, make sure that paint does not get into the joints - it's easy to get it in, but getting it all out again is no easy matter.

In PART 2 we will tackle the problems involved in "stringing" the overhead wires, so get practising on that pantograph.

-o-o-o-o-o-o-o-o-

ROLLING STOCK DRAWINGS
by Geoff. Lorner.

In attempting to provide useful data on Australian Railways' Rolling Stock, drawings have been prepared to a scale of 1/8" : 1ft. so that they can be published in "The Journal".

When reducing to such a small scale some approximations have to be made. For example: If, as

on the blueprint of the NSWGR's OBS car, a dimension is given as 4'0-21/32", what approximation is to be made on an 1/8" scale drawing? Most would probably agree to discard the 21/32", leaving the dimension as 4'0" which would be drawn in 1/8" scale as 1/2".

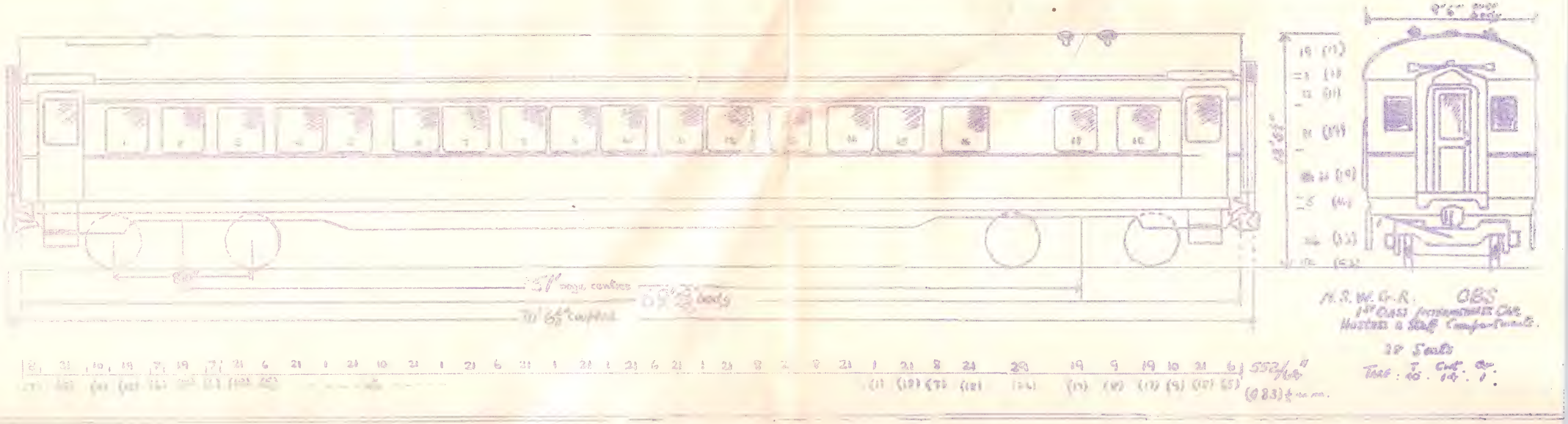
However, this dimension appears twice in the length of the OBS car so we have dropped 2x21/32" or 1-5/16" which in 1/8" scale is getting close to 1/64". One suggestion is to add this 1/64" to another dimension in the length of the car where it would not be noticed, i.e., where it would not affect the visible proportions of the car, e.g., on the OBS car there is a large space between the 16th and 17th windows, 1/64" added here would not be noticed whereas if it were added to one of the windows it would look odd in comparison with other windows.

Most features of the car side are not labelled on a blueprint with fullsize dimensions - we have to measure them with due regard to the scale of the blueprint. Even when working in 64ths in measuring a series of windows (which appear to be similar) we may find it difficult to decide on the exact measurement owing to the thickness of the lines on the print. In such a case we would approximate to the nearest 1/64".

We might, for example, have a measurement of 22/64" (11/32") on the blueprint which is to the scale of 3/16" = 1ft. (where 1/16" = 6", 1/32" = 3", and 1/64" = 1"). The 22/64" is therefore 22" = 1'10" in full size. Now, in 1/8" scale 1/16 = 6", 1/32 = 3" and 1/64 = 1-1/2" so we could take 1'9" = 1/8 + 3/32"

If we add another 1/64" we have a closer approximation, i.e., 1/10-1/2".

However, we now come to the problem of 12 windows each 1'10" wide. If we drew them all as 15/64, i.e. 1'10-1/2" we will lengthen the car side by 12 x 1/2" = 6" which is 1/16" in 1/8" scale. In this case we may decide to disperse the 1/16" by adding 1/64 to each of 4 similar looking spaces somewhere along the car side.



N.S.W. G.R. CBS
1st Class Intermediate Car
Mixture & Staff Compartments.
38 Seats
Tare: T. Cwt. Qr. lb.

In general then, we have to approximate the blueprint measurements and then perhaps approximate again on the scale drawing. However, it often happens that we drop a fraction of the fullsize dimensions and then find that we can go UP again in working to the nearest 1/64" on the 1/8" scale, thus tending to equalise the error.

In the drawings given, the sum of the approximated full size dimensions as taken from the blueprint is equal to the length of the car and the approximations made are to the nearest and most suitable 1/64th.

These fullsize dimensions are then scaled and again adjusted so that they add up to the scale length of the car. E.g. Length of body, 69'0-9/16" (the 9/16" has been dropped, leaving 69' = 8-5/8" in 1/8" scale.) The individual dimensions, measured in 64ths, of doors, windows, and the spaces between them add up to 8-5/8" or 552/64ths.

Those modelling in 1/4" scale simply read the figures on the drawing as 32nds. E.g. the width of a door on the OBS is given as 21 = 21/64" in 1/8" scale
and 21/32" " 1/4" "

For 3.5mm and 7mm scales the figures in brackets are the dimensions in half mms. They have been calculated and then approximated to give a total scale length of 69' in 3.5mm scale = 241.5mm or 483 half mm. Thus the door (18) is 18 half mm in 3.5mm scale
and 18 full mm in 7mm scale.

It is proposed to produce further similar plans as follows: NSW - SFS and VR - BW
" - BH " " - ABW
" - PTH " " - CW
and also similar drawings of Goods Vehicles.

We would like to hear your views on this type of drawing and also a list of the types of vehicles - passenger and goods, which would be of most value to you, also, Interstate members who can obtain line drawings of their State's vehicles for inclusion too.

AMRA BRANCH — SUCCESSFUL VISITORS' NIGHT.

The most successful night held to date by the [illegible] Victorian Branch was undoubtedly the Visitors' Night on Fri. June 26th, when a roll-up of 140 members and visitors filled the meeting hall at St. Marks, Fitzroy. This rally was unpredicted, and was the more remarkable in view of the fact that 40 odd chaps who had intimated they would be there did not get along.

As it was held on a normal Branch Meeting Night, Chairman, Rick Richardson, to the summons of a hand-bell, called the meeting to order, and, mounting a chair declared the meeting open and welcomed the visitors, who included several ladies. He then proposed, that in view of the numbers present and the many points of interest to be inspected that the very excellent Minutes of the last Meeting be taken as read, which proposal was agreed to unanimously and the business of the evening, the craning of necks in all directions, was under way.

Surveying the assembly seeking a point from whence to commence reporting, it appeared that the only thing was to fix on a spot and work from there around, taking in everything as it came, and that point happened to be the series of photos taken at the Stand of the VMRS at the Models Display held in the Exhibition Buildings during Aug 30 - Sep 6, 1952.

These photos, exhibited by Don Worth, showed close-ups man from the public view, and operating scenes from the business side of the layout. They are so good that some views looked like real life until one remembered that part of the layout from adjoining scenes.

Geoff Lorner exhibited a group of NSWGR diesel-units photos which were very interesting, and these led up to quite a large display of official VR present day photos of large dimension, rounding off with those of perhaps even more interest, original historical photos of the VR showing many aspects of

lines, structures, bridge openings, stations, rolling stock and even mishaps such as washaways, of the old days. Brian McClure had an interesting show of his own photos, part of the fruits of 2 trips to Port Kembla and Tyamsford which whetted one's desire to do likewise.

In the centre of the hall Dave Cross was kept busy running the Drawbar Pulling Contest, whilst in another corner Bob Smith drove an 'O' gauge Lionel around a portable 'dismantleable' track he had built. He used quite an ingenious method of valve plugs and sockets to quickly connect up each section's wiring.

On the hand-built models tables Ern Mainka displayed his 1102 suburban electric loco, 'VR', 'A2', 'R' and 102 HP Walker diesel railmotor. Nev Levin sent along his A2 and R class locos and a searchlight signal and 3-position head, the subject of his excellent articles in the Journal. Mayer Levy had his meticulously under-floor detailed VR & shedded open trucks, and Dr Gutteridge his live steam 4-4-0 Midland Compound. Ron Rennie set down on the table a handful of bardmers, with the query, "Anyone recognize it?" "It", which no one did recognize from their last view of it was his Leeds 'O' gauge tank, smoke exhausting, from which Ron had removed the paint, added a sand dome, piping, shunters' guards, and I fancy he mentioned it is to have pilots and a bell - "give it that stubby, powerful look." Sure will, Ron, sure will - -

Andy Lyell's 'V' class Vauclain compound, 'F' class diesel switcher and 3' gauge Climax are always welcome exhibits, and Andy says his cut-an'-fill under the house layout is proceeding slowly, as limited spare time becomes available. Common complaint, Andy, suffer from it myself! Frank Kershaw's freelance 1100 VR type suburban electric loco showed really fine workmanship, whilst the

detailing of Peter Duckett's '0' gauge bogie, and pantograph, were masterly. For this, Peter was awarded the Certificate for the Best Group of Models.

Ron Easterby's award for the Most Unusual Model was well justified by his KWR Industrial Electric loco.

Meyer Levy's trucks gained him the award for the Best Home-built Rolling Stock Model. Frank Kelly's beautiful little consist of 'T' ice-box, 'H' box-van, 'Q' flat and 'Z' van after A416, 4-4-0 in 3.5mm on 16.5mm caused our Judge to name him Runner-up for the Best Group of Models. Frank's work in this fine scale is precision itself. Young Ian Wolckhardt won the competition to guess the weight of the '0' gauge Industrial saddle-tank and the 16.5, 0-6-0 East and East Sussex Rly. 'Hecate' by John Stamp. Actual weight was 3lbs 6-1/2 ozs. and Ian's estimate was 3lbs 5.5 ozs. - don't ask me how he arrived at the .5. Ken Healing guessed 3-15 and for some reason became the Unluckiest Model Fan.

Doug McFadden would be the Luckiest Model Rail Fan without doubt as he had the Lucky Number on his card which earned him a Dump-car Paper-weight by Rick Richardson, which would have been an adornment to the desk of the Commissioner for Railways! Two well-earned and applauded Certificates were to Arnie Dean for AMRA's Best Backroom Boy, and Mrs Dean, Best Back-room Girl, a recognition for her good work behind the scenes on Club Nights attending to the supper, a gesture which is appreciated by everyone. As a slight token of this appreciation she was asked to come forward to receive a dainty basket of flowers, in which she blushingly acquiesced.

Results of Dave Gross' Loco Trials were:

HOME BUILT '0'	Ern Mainka's A2
COMMERCIAL '0'	Jim Scott's Haag Electric
Half-0 HOME 'DONEOVER'	Fred Youie's Trix Switcher
" " COMMERCIAL	Phil Ward's Bowser Mountn.

In another room, Brian McClure projected stills on British Railways and supplied the commentary, doing

a job which immensely impressed all who heard him.

A most pleasing feature of the evening was the presence in the gathering of a sprinkling of womenfolk. Members and Visitors who had their ladies with them were Messrs Richardson, Dean, Dunlop, Lormer, Mainka and Henderson and Dick Gutteridge and his fiancé, Miss Judy Hall, and we would like these members and visitors to pass on to their womenfolk our pleasure at their company.

Chairman, Rick Richardson, did the lion's share of the work to make the evening a success, one item alone that entailed much preparation was the designing and printing, then photographing, enlarging and developing of the Certificates which were given to the winners of the various awards.
Assisting in various ways on the day arranging stands and exhibits and transportation were Brian McClure, Geoff Lormer and Mayer Levy. Mrs Dean took charge of the supper arrangements, ably supported by Mrs Rick Richardson - whose scones, by the way, were everyone's first favourite - and other ladies, and in this regard we would like to thank an anonymous donor who gave £5 which defrayed the expenses of the supper, leaving a small amount to credit to Branch Funds.

Small displays of commercial goods were arranged by Messrs Pearson, Norman, Noisette and Meadmore, whilst Jim Ray, of Melb. Sports Depot breezed round.

On behalf of all present I would like to say a "jolly well done" to Rick for a stout effort, and to all who backed him up and made this Night the undoubted success it surely was.

READERS' NEWS

AND VIEWS -

YOUR page - use it.

THE AUSTRALIAN MODEL RAILWAY ASSOCIATION

MEMBERSHIP LIST 17. 7. 53.

Name	Address	Gauge	Scale
L. Aa	8 Bowen Cres Melbourne Vic	16.5mm	3.5mm 4 mm
I. W. Ashton	47 Bellett St Camberwell Vic	1⅝"	¼"
P. D. A'Vard	5 Kooringa Rd Carnegie Vic	16.5mm	3.5mm
W. Barker	McLean Rd Boronia Vic		
L. Baxter	85 Thackeray Rd Reservoir Vic	1⅝"	¼"
D. Beckworth	14 View St Mornington Vic	1⅝"	¼"
R. D. Bennett	4 Bishop St Oakleigh Vic	16.5mm	3.5mm
R. D. Binzer	97 Bramston St Tarragindi Qld	16.5mm	3/16"
R. C. Bowen	66 Malmsbury St Kew Vic	1⅝"	
S. M. Bradford	25 Asquith St Box Hill Vic	1⅝"	¼"
A. C. Carey	169 Albert St Sebastapol Vic	16.5mm	
J. Chaplin	9 Saltair St Moorabbin Vic	16.5mm	4 mm
H. Clark	21st Constr Sqdn RAE Puckapunyal Vic	1⅝"	¼"
W. Cleaves	20 Rosedale Gr Ivanhoe Vic	1⅝"	7 mm
C. R. Cocker	Foster St Campbell Town Tas.	1⅝"	¼"
R. Colwell	36 Lawson Pde Moorabbin Vic	1⅝"	¼"
C. L. Craig	11 Munro St Kew Vic	1⅝"	¼"
B Crilly	31 Vasey St E. Bentleigh Vic	1⅝"	¼"

	Name	Address	Gauge	Scale
J.	Durry	779 Whitehorse Rd Mont Albert Vic	16.5mm	1/80"
K.	Cutler	Box 13 Wallerawang NSW	1¼"	7 mm
E.	Daan	272 George St Fitzroy Vic	1¾"	½"
H.	Delaney	98 Oakleigh Rd Carnegie Vic	16.5mm	3.5mm
D.	Dolley	"Le Chateau" Don Rd Healesville Vic	1¼"	½"
L. A.	Draper	149 Atherton Rd Oakleigh Vic	1¼"	
A. W.	Ducat	Flat 9 3 Tahara Rd Toorak Vic	16.5mm	3.5mm
P.	Duckett	69 Howitt Rd Caulfield Vic	1¼"	½"
T.	Dunlop	105 Blake St Reservoir Vic	16.5mm	3.5mm
R.	Easterby	71 Ashburton Rd Glen Iris Vic	1¼"	½"
P.	Elderin[illegible]	"Tina" Milk Bar Burke Rd Gardiner Vic	1¼"	½"
J. P.	Fasoli	19 Farnham St Flemington Vic	16.5mm	1/8"
J.	Fidos	101 Tryganini Rd Carnegie Vic	16.5mm	
G.	Fryer	1 Station Av Jordanville Vic	16.5mm	4 mm
V.	Gardner	583 Olive St Albury NSW	All Gauges & Scales	
T.	Gasson	Agnes P.O. Sth Gippsland	16.5mm	
J. D.	Gibson	York St North Sale Vic	1¼"	
H.	Groome	Flat 1 Anderson's Rd East Hawthorn Vic	1¼"	7 mm Fine

Name	Address	Gauge	Scale
J. D. Gross	13 Heath St Sandringham Vic	16.5mm	3.5mm 3.8mm
R. Guttoridge	4 Como Av Sth Yarra Vic	1½"	¼"
G. W. Gilmore	Box 197 Cairns Qld	1½"	¼"
H. Harley	C/- H. Biel Hillon St E. Brisbane Qld	16.5mm	4 mm
Hartley's Ltd.	270 Flinders St Melbourne Vic	All Gauges & Scales	
M. Haustorfer	24 Waterdale Rd Ivanhoe Vic	1¼"	¼" 7 mm
B. Hearn	316 Balwyn Rd Nth Balwyn Vic	16.5mm 1½"	4 mm 7mm ¼"
R. Hill	4 Cawkwell St Malvern Vic	16.5mm	3.5mm
D. Hitch	6 Moama St Sunshine Vic	16.5mm	3.5mm 4 mm
A. Holden	Mt. Napier Rd Hamilton Vic	16.5mm	3.5mm
W. Hosmok	27 Kitchener Rd Croydon Vic	1¼"	
A. J. Houston	Madeline St Clayton Vic	16.5mm	3.5mm
F. Kelly	13 Wordsworth St Moonee Ponds Vic	16.5mm	3.8mm
L. Kennon	Flat 4 3 Molesworth St Auburn Vic	16.5mm	4 mm
R. Lamble	"The Lodge" Oxford Rd. Kilsyth Vic	16.5mm	4 mm
N. Levin	27 Avelin St Hampton Vic	1¼"	¼"
M. H. Levy	8 Gould St Brighton Vic	1¼"	¼"
C. W. Lormer	181 Burke Rd East Malvern Vic	1¼"	¼"
G. Loughnan	Flat 4 15 Carpenter St Mid Brighton Vic	1¼"	

Name	Address	Gauge	Scale
J. Lowry	3 Caroline St Hawthorn E. Vic	1½"	½"
K. W. Lowry	3 Caroline St Hawthorn E. Vic	1½"	½"
A. Lyall	4 Fairview St Hawthorn Vic	1½"	½"
B. McClure	227 Highfield Rd Burwood Vic	16.5mm	4 mm
F. McConnell	69 Mintaro Av S. Strathfield NSW	1½"	½"
B. L. McFadden	Kangaroo Ground Vic	16.5mm	4 mm
D. McFadden	Kangaroo Ground Vic	16.5mm	4 mm
J. McLean-Fox	Flat 2 25 Carpenter St M. Brighton Vic	16.5mm	4 mm
R. McWhinney	91 Coonan's Rd Pascoe Vale Sth Vic	1½"	½"
E. Meinke	12 Flora Gr Ivanhoe Vic	1½"	½"
R. F. Merchell	10 Moonee St Ascot Vale Vic	1½"	½"
J. [illegible]	4 Canberra Gr Malvern Vic	16.5mm	[illegible]
Melbourne Models	163 Exhibition St Melbourne Vic	All Gauges & Scales	
Melbourne Sports Depot	55 Elizabeth St	All Gauges & Scales	
G. K. Meller	56 Leader St Goodwood S.A	16.5mm	4 mm
R. Mennie	5 Bamfield St Sandringham Vic	1½"	½"
P. Mottram	22 Pine St West Hobart Tas	16.5mm	4 mm
H. Norman	1248 High St Malvern Vic	All Gauges & Scales	
New Systems Radio	100-2 Hunter St Newcastle NSW	All Gauges & Scales	

Name	Address	Gauge	Scale
C. F. Noisette	352 St. Georges Road, Nth. Fitzroy Vic	All Gauges & Scales.	
P. Nugent	5 Balmoral St Essendon Vic	1¼"	½"
"O" Gauge House	5 Curt St. Ashfield NSW	1¼"	7 mm
Pacemaker Model Engineering Supplies	Box 9 P.O. Albury NSW	16.5mm 32 mm 9.5mm	3.5mm 4 mm 2 mm
R.W.O. Pearson	16 Appleton St Richmond Vic	All Gauges & Scales	
R. L. Perrey	8 King St Gardiner. Vic	16.5mm	3.5mm
P. Pookley	15 Chester St Herne Hill Geelong Vic	1¼"	½"
R. F. Purday	16 Budd St Collingwood Vic	16.5mm	
Cpl E. Raddatz	T.I.R.S. 1 A.D. RAAF Laverton Vic	16.5mm	3.5mm
R. Rattray	Port Franklin Sth Gippsland Vic	1¼"	
W. Rattray	8 Sharpe St Regent Vic	1¼"	7 mm
L. W. Rea	13 Tatong Rd E. Brighton Vic	1¼"	7 mm
N. Read	1 Augusta St Strathfield NSW	1¼"	½"
C. Richardson	18 Lesley St Burwood Vic	ON2½ 16.5mm	½"
H. Richardson	5 Plant St Carlton. NSW	1¼" 16.5mm	
J. Richardson	29 Seymour Gr Brighton Vic	1¼"	½"
R. Rigby	9 Breyl St Burwood Vic	16.5mm	
J. Rigelsford	79 Henley Marine Drive Five Dock NSW	1¼"	

Name.	Address.	Gauge	Scale
Robilt Products	219 Bay St. Sandringham Vic	1¼"	
J. A. Scott	"Euglebar" Kerr Cres Montrose Vic	1¼"	7 mm
R. A. Siddall	5 Waverley St Sandringham Vic	16.5mm	3.5mm
A. Simmons	4 Park St Brighton Vic	1¼"	7 mm
F. Slovnik	6 Burringbar St Balgowlah NSW	16.5mm	3.5mm
Herbert Small Pty. Ltd.	308 Collins St Melbourne Vic	All Gauges & Scales	
A. Smith	6 Tamar St Essendon Vic	1¼"	¾"
B. Snowfoot (Tpr)	3/3425 1st Armd Regt Puckapunyal Vic	16.5mm	
W. Sparke	69 Woods St Newport Vic	16.5mm	4 mm
J. W. Stamp	11 Menzies Av Brighton	16.5mm	4 mm
A. Stanbury	3 Langham Terr Unley. S.A.	1¼"	¾"
W. J. Stoney	2a Barbara Av Burwood Vic	16.5mm	4 mm
G. Stringer	"Tullooh Hill" Mickleham via Broadmeadows Vic	1¼"	¾"
R. Stringer	ditto	1¼"	¾"
Dr, S. Suggit	20 Henry St Ascot. Brisbane Qld	16.5mm	4 mm
H. Tisher	25 Mt. Ida Av Hawthorn Vic	1¼"	7 mm
G. Usherwood	2a Marsh St Arncliffe Sydney NSW		
N. Wadeson	90 Dandenong Rd Frankston Vic	1¼"	¾" 7 mm

Name	Address	Gauge	Scale
Capt. R. A. Wallace	34a Glen Orme Av Ormond Vic	1¼"	¼" 7mm 17/64"
G. D. Watsford	13 Karma Av E. Malvern Vic	16.5mm	3.5mm
I. G. Weickhardt	3 Mars St. Caulfield Sth Vic	1¼"	¼"
K. J. Wilcox	89 Links Av. Concord. NSW	1¼"	17/64"
A. Wilson	351 Whitehorse Rd Balwyn Vic	16.5mm	3.5mm
F. Youie	39 Charles St Abbotsford Vic	16.5mm	3.5mm ¾ mm